ISSN: 0975-833X

Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 9, Issue, 03, pp.48538-48541, March, 2017

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

RESEARCH ARTICLE

EFFECT OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING CARE OF LOW BIRTH WEIGHT BABIES AMONG POSTNATAL MOTHERS

[1]Jayaranjini, K. and [2,*]Dr. P. Vetriselvi

[1]M.Sc.Nursing, College of Nursing, JIPMER, Puducherry
[2]Assistant Professor, College of Nursing, JIPMER, Puducherry

ARTICLE INFO

Article History:
Received 17th December, 2016
Received in revised form
02nd January, 2017
Accepted 20th February, 2017
Published online 31st March, 2017

Key words:

Care of low birth weight babies,
Structured teaching programme,
Knowledge of postnatal mothers.

ABSTRACT

Background: Inadequate knowledge of postnatal mothers regarding care of low birth weight babies will pave the way for increase in morbidity and mortality. There are only few studies that assessed their knowledge.
Methodology: This prospective clinical trial was conducted at a tertiary care teaching hospital in south India. Postnatal mothers knowledge, before and after structured teaching programme was assessed in 75 postal natal mothers.
Results: Knowledge of postnatal mothers after structured programme was significantly high.
Conclusion: Structured teaching programme is effective in enhancing the knowledge level of postnatal mothers.

Citation: Jayaranjini, K. and Dr. P. Vetriselvi, 2017. "Effect of structured teaching programme on knowledge regarding care of low birth weight babies among postnatal mothers", *International Journal of Current Research*, 9, (03), 48538-48541.

INTRODUCTION

Children are the most vulnerable part of our population. Therefore, every citizen should focus on promoting their health and safeguarding their interest. Our nation's future depends on how we nutrient our children. So children should be allowed to attain his or her optional growth and development. So that they can contribute effectively towards nation. According to World Health Organization (WHO), low birth weight baby is defined as an infant weighing less than 2500 grams. It was more common in developing countries that contribute to perinatal and neonatal mortality. Adejuyigbe (2008) quoted that babies whoever coming under low birth weight category suffer adversely from physiological handicaps like respiratory distress, difficulty in maintaining temperature, susceptible to infection and inability to suck. According to World Health Organization, the estimated global burden of neonatal deaths is to be 4 million. The majority (75%) of all neonates' deaths happens in the first week of life, among which25% to 45% occurs within the first 24 hours. Biswas (2008) stated that in developing countries, the incidence of LBW baby is 30% to 40% and preterm baby is about 20% to 25%. An estimated highest incidence of about 31% of all infants with LBW was observed in south Asia and 7% was observed in East Asia. In India each year, neonates born with LBW are 7.8 million, accounting for about 40% of the global burden. Higher incidence of low birth weight baby and poor access to hospital care place more responsibility on mothers, therefore inadequate knowledge of the mother relating to care of low birth weight babies will increase the mortality rate. So mothers are in need to learn about the care and support to perform their role effectively and efficiently. Thus the study will be helpful in providing the insights into the need of educating the mother.

***Corresponding author:* Dr. P. Vetriselvi**
Assistant Professor, College of Nursing, JIPMER, Puducherry

MATERIALS AND METHODS

Prospective clinical trial, i.e. Quasi non-experimental one group pre-test and post-test design was adopted for the study to assess the effect of structured teaching programme on care of low birth weight babies among postnatal mothers admitted in JIPMER, Puducherry.

Inclusion criteria

- Mothers of low birth weight babies got admitted in postnatal ward.
- And in LEVEL I NICU,
- Mothers of age > 18 years.
- And Mothers who knows Tamil or English.

Exclusion criteria

- Mothers with critically ill child.
- Mothers who are not available during the time of post-test.

Sampling

Convenient sampling technique was used.

Instruments: Subject data sheet had a set of questions that was oriented to the demographic and clinical data of subjects. To assess the knowledge, structured questionnaire was used.

Data collection procedure: Informed written consent was obtained from the study participants. Every day, postnatal mother's with low birth weight babies who fulfilled the inclusion criteria were selected through convenient sampling method. After selecting the participants, the structured questionnaire was administered by interview method. For each mother 20-30 minutes was spent. Then structured teaching program was conducted for a period of 30-40 minutes. After one week, post-test was conducted.

Ethical Considerations: The study was conducted with the Institute ethics committee (Human studies) approval. The consent was obtained by the researcher from the postnatal mothers of low birth weight babies before data collection. Confidentiality was assured to the participants. The participants had freedom to withdraw from the study at any time without any loss of benefits and the reason.

Data analysis: The distribution of data on categorical variables on demographic and maternal variables were expressed as frequency and percentage. The level of knowledge on care of low birth weight babies was expressed in mean with standard deviation. The association of knowledge level with socio-demographic and maternal variables was carried out using chi-square test. The change in the level of knowledge as an impact of Structured Teaching Program was carried out by using Paired t test.

RESULTS

- The percentage distribution of demographic variables revealed that 72% of mothers were between 21 to 30 years and 12% of mothers were above 30 years. Regarding education 50.7% of mothers had secondary level education.
- With regard to occupation 81.3% were unemployed. Regarding family income, in 50.7%, the family income was < Rs.5000, Regarding the place of residence, 60% of mothers belonged to rural community. Type of delivery shows that 64% of mothers had normal delivery.
- Regarding the previous knowledge on care of LBW babies only 34.7% of mothers had previous knowledge. In regard to parity, it reveals that 84% of mothers were primi-para. Regarding birth weight of the baby 49.4% were between 1.6-2kg. Gestational age of the mothers showed that, 57.3% mothers were between 34-37 weeks.
- Regarding the previous history of LBW babies, 93.3% mothers didn't have. .Among 75 mother's 64% had inadequate knowledge, 36% had moderately adequate knowledge and none of the mother's had adequate knowledge regarding care of low birth weight babies in the pre-test. The mean score of pre-test level of knowledge is 9.91 with standard deviation 3.163.

Table 1. Frequency distribution of study subjects in relation to socio-demographic variables of subjects

S.No.	Demographic data	Frequency	Percentage
1.	**PART A** **Age**		
	20 years or less	12	16
	21-30 years	54	72
	>30 years	9	12
2.	**Education**		
	No formal education	3	4
	Primary education	23	30.7
	Secondary education	38	50.7
	Graduation & above	11	14.6
3.	**Occupation**		
	Employed	14	18.7
	Unemployed	61	81.3
4.	**Religion**		
	Hindu	68	90.7
	Muslim	6	8.0
	Christian	1	1.3
	Others	0	0
5.	**Family income per month (in Rupees)**	38	50.7
	Below Rs.5000	37	49.3
	Above Rs.5000		
6.	**Type of family**		
	Nuclear family	18	24
	Joint family	57	76
7.	**Place of residence**		
	Urban	30	40
	Rural	45	60
8.	**Type of present delivery**		
	Normal delivery	48	64
	Instrumental delivery	13	17.3
	Caesarean delivery	14	18.7
9.	**Previous knowledge regarding LBW babies**		
	Yes	26	34.7
	No	49	65.3
10.	**Source of information regarding LBW babies**		
	Radio/ Television	4	5.3
	Newspaper/ Books	2	2.8
	Family member/ relatives/ friends	7	9.3
	Health personnel/ Health magazine	13	17.3
	Nil	49	65.3
11.	**PART B** **Parity**		
	Primi-para	63	84
	Multi-para	12	16
12.	**Gender of the baby**		
	Male	39	52
	Female	36	48
13.	**Birth weight of the baby**		
	<1.5kg	13	17.3
	1.6-2kg	37	49.4
	2.1-2.5kg	25	33.3
14.	**Gestational age of the mother**		
	<28 weeks	5	6.7
	29-33 weeks	7	9.3
	34-37 weeks	43	57.3
	>37 weeks	20	26.7
15.	**Previous history of LBW babies**		
	Yes	5	6.7
	No	70	93.3

- In the post-test among 75 mothers, 41.3% of mothers had moderately adequate knowledge, 58.66% had adequate knowledge and none of the mothers had inadequate knowledge. The mean score of post-test level of knowledge is 21.24 with standard deviation 2.716 and its obtained "t" value is -29.24 which is highly significant at 0.001 level. Thus it revealed that structured teaching programme on care of low birth weight babies was effective among postnatal mothers.
- Demographic variables are not associated with the mothers pre-test level of knowledge regarding care of low birth babies.

Table 2. Pre-test level of knowledge regarding care of low birth weight babies among postnatal mothers

Knowledge score	Pre-test		Level of knowledge
	Frequency	Percentage	
1-10	48	64	Inadequate knowledge
11-20	27	36	Moderately adequate knowledge
21-30	0	0	Adequate knowledge

Table 3. Post-test level of knowledge regarding care of low birth weight babies among postnatal mothers

Knowledge score	Post-test		Level of knowledge
	Frequency	Percentage	
1-10	0	0	Inadequate knowledge
11-20	31	41.3	Moderately adequate knowledge
21-30	44	58.66	Adequate knowledge

Table 4. Comparison of pre-test and post-test level of knowledge regarding care of low birth weight babies among postnatal mothers

Knowledge	Mean	Standard deviation	Paired "t" value	Statistical significance
Pre-test	9.91	3.163	t = -29.225	p = 0.000***
Post-test	21.24	2.716		

*** P < 0.001

Table 5. Association of pre-test knowledge categories with socio-demographic variables

S.No.	Socio-demographic variables	Knowledge categories		Statistical significance
		Inadequate knowledge	Moderately adequate knowledge	
1.	**PART A**			
	Age			
	20 years or less	7 (9.3%)	5 (66.6%)	X^2 =2.234
	21-30 years	37 (49.3%)	17 (22.6%)	P > 0.05
	>30 years	4 (53.3%)	5 (66.6%)	
2.	**Occupation**			
	Employed	9 (12%)	5 (66.6%)	X^2= 0.001
	Unemployed	39 (52%)	22 (29.3%)	P > 0.05
3.	**Family income per month (in Rupees)**			
	Below Rs.5000	22 (29.3%)	16 (21.3%)	X^2= 1.246
	Above Rs.5000	26 (34.6%)	11 (14.6%)	P > 0.05
4.	**Type of family**			
	Nuclear family	12 (16%)	6 (8%)	X^2= 0.073
	Joint family	36 (48%)	21 (28%)	P > 0.05
5.	**Place of residence**			
	Urban	17 (22.6%)	13 (17.3%)	X^2= 1.167
	Rural	31 (41.3%)	14 (18.6%)	P > 0.05
6.	**Type of present delivery**			
	Normal delivery	31 (41.3%)	17 (22.6%)	X^2 = 0.954
	Instrumental delivery	7 (9.3%)	6 (8%)	P > 0.05
	Caesarean delivery	10 (13.3%)	4 (5.3%)	
7.	**Previous knowledge regarding LBW babies**			
	Yes	13 (17.3%)	13 (17.3%)	X^2 = 3.385
	No	35 (46.6%)	14 (18.6%)	P > 0.05
8.	**PART B**			
	Parity			
	Primi-para	43 (57.3%)	20 (26.6%)	X^2= 3.093
	Multi-para	5 (6.6%)	7 (9.3%)	P > 0.05
9.	**Gender of the baby**			
	Male	25 (33.3%)	14 (18.6%)	X^2= 0.000
	Female	23 (30.6%)	13 (17.3%)	P > 0.05
10.	**Birth weight of the baby**			
	<1.5kg	9 (12%)	4 (5.3%)	X^2= 1.056
	1.6-2kg	25 (33.3%)	12 (16%)	P > 0.05
	2.1-2.5kg	14 (18.6%)	11 (14.6%)	
11.	**Previous history of LBW babies**			
	Yes	2 (2.6%)	3 (4%)	X^2 = 1.339
	No	46 (61.3%)	24 (32%)	P >0.05

DISCUSSION

The mean score of post-test level of knowledge is 21.24 with standard deviation 2.716. Thus it revealed that structured teaching programme on care of low birth weight babies was effective among postnatal mothers. The above findings were supported by the following study. Kaur (2013) conducted a pre-experimental study to assess the effectiveness of structured teaching programme on knowledge on care of low birth weight baby among (NICU) staff nurses. It was conducted in 6 pediatrics hospitals at Jalandhar district, Punjab. Sixty staff nurses were selected by convenience sampling technique. A pre-test was conducted by using structured questionnaire followed by structured teaching programme. After one week post-test was given. The pre-test mean score was 15.60 with the S.D.5.98 and post-test mean score was 22.68 with S.D. of 4.55. The obtained t value was 14.46*, which is highly significant at $p<0.005$. The study findings showed that the education plays an important role in improving the knowledge on care of low birth weight among the staff nurses.

Conclusion

The present study conclude that structured teaching programme regarding care of low birth weight babies was effective among postnatal mothers with low birth weight babies. Providing education helps to improve the care of low birth weight babies. Hence it could be implemented into practice to promote the health of the babies and to reduce the mortality and morbidity among low birth weight babies.

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